

CLAIMS

What is claimed is:

1. A method for monitoring for the successful transmission of a sequence of command

5 codes transmitted from a remote control, the method comprising:

receiving a transmission from the remote control comprising at least a part of the
sequence of command codes;

determining if the transmission from the remote control included all of the
command codes in the sequence of command codes; and

10 when the transmission from the remote control is determined to include less than
all of the command codes in the sequence of command codes, performing an action for
the purpose of initiating a retransmission of at least those command codes in the sequence
of command codes determined to be missing.

15 2. The method as recited in claim 1, wherein the action comprises generating an audible
signal.

3. The method as recited in claim 1, wherein the action comprises generating a visual
signal.

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4. The method as recited in claim 1, wherein the action comprises directly retransmitting
at least those command codes in the sequence of command codes determined to be
missing.

5. The method as recited in claim 1, wherein the action comprises sending a signal to the remote control to cause the remote control to retransmit at least those command codes in the sequence of command codes determined to be missing.

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6. The method as recited in claim 5, wherein the signal comprises data indicative of command codes within the sequence of command codes determined to be missing from the sequence of command codes.

10 7. The method as recited in claim 5, wherein the signal comprises command codes within the sequence of command codes determined to be missing from the sequence of command codes.

15 8. The method as recited in claim 1, wherein the action comprises transmitting a signal to a secondary device to cause the secondary device to retransmit at least those command codes in the sequence of command codes determined to be missing.

20 9. A remote control transmission monitoring system, comprising:
a remote control having programming for transmitting a sequence of command codes; and
a command receiver having programming for determining if the transmission from the remote control included all of the command codes in the sequence of command

codes and for performing an action for the purpose of initiating a retransmission of at least those command codes in the sequence of command codes determined to be missing.

10. The system as recited in claim 9, wherein the action comprises generating an audible

5 signal.

11. The system as recited in claim 9, wherein the action comprises generating a visual

signal.

10 12. The system as recited in claim 9, wherein the action comprises transmitting a signal

to the remote control to cause the remote control to retransmit at least those command

codes in the sequence of command codes determined to be missing.

13. The system as recited in claim 12, wherein the signal comprises data indicative of

15 command codes within the sequence of command codes determined to be missing from

the sequence of command codes and the remote control has programming for using the

data to retransmit the command codes within the sequence of command codes determined

to be missing from the sequence of command codes.

20 14. The system as recited in claim 12, wherein the signal comprises command codes

within the sequence of command codes determined to be missing from the sequence of

command codes and the remote control has programming for retransmitting the command

codes within the sequence of command codes determined to be missing from the sequence of command codes.

15. The system as recited in claim 9, wherein the command receiver is further adapted to

5 learn the sequence of command codes directly from the remote control.

16. The system as recited in claim 9, wherein the command receiver is further adapted to

communicate with a network whereby the sequence of command codes is downloadable

into the command receiver.

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17. The system as recited in claim 9, wherein the command receiver further includes a

keypad for use in teaching the sequence of command codes to the command receiver.

18. The system as recited in claim 9, wherein the command receiver is integrated within

15 a home appliance.

19. The system as recited in claim 9, wherein the command receiver is adapted to

prevent the performance of operations of a home appliance corresponding to the sequence

of command codes until such time as it is determined that all of the command codes

20 within the sequence have been successfully received by the command receiver.

20. The system as recited in claim 9, wherein the command receiver is adapted to cause

an appliance to perform all of the operations corresponding to the sequence of command

codes when it is determined that the command receiver has received less than all of the command codes within the sequence.

21. The system as recited in claim 9, wherein the remote control and the command

5 receiver communicate via a network.

22. The system as recited in claim 21, wherein the network comprises the Internet.

23. A method for monitoring for the successful transmission of a command code

10 transmitted from a remote control, the method comprising:

receiving a transmission from the remote control;

determining if the transmission from the remote control comprises a command code that is stored within a library of command codes; and

15 when the transmission from the remote control is determined to not include a command code that is stored within the library of command codes, performing an action for the purpose of initiating a retransmission of at least those command codes in the sequence of command codes determined to be missing.

24. The method as recited in claim 23, wherein the action comprises generating an

20 audible signal.

25. The method as recited in claim 22, wherein the action comprises generating an

audible signal.

26. The method as recited in claim 22, wherein the action comprises transmitting a signal to the remote control to adapt the remote control to retransmit at least those command codes in the sequence of command codes determined to be missing

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27. A remote control transmission monitoring system, comprising:

a remote control for transmitting a sequence of command codes; and

a command receiver for monitoring the transmission from the remote control;

wherein the command receiver is programmed such that, as each command code

10 in the sequence is received from the remote control, the command receiver confirms and acknowledges the receipt of that command code with the remote control and wherein the remote control waits for the acknowledgement before transmitting the next command code in the sequence of command codes.

15 28. The system as recited in claim 24, wherein the remote control retransmits a command code if the acknowledgement is not received within a predetermined time.

29. A method for programming a command receiver to monitor remote control transmissions, comprising:

20 receiving a transmission from the remote control to place the command receiver in a learning mode;

receiving a transmission from the remote control comprising a sequence of command codes;

- storing a representation of the sequence of command codes within a memory accessible to the command receiver; and
- receiving a transmission from the remote control to exit the learning mode;
- whereby the representation of the sequence of command codes is available to
- 5 compare against future transmissions received from the remote control to determine if the future transmission from the remote control comprises the sequence of command codes.
30. The method as recited in claim 29, further comprising causing the command receiver to retransmit any command codes determined to be missing from a transmission received
- 10 from the remote control.
31. The method as recited in claim 29, wherein a label is associated with the sequence of command codes transmitted by the remote control and the method further comprises the step of storing the label within the memory.
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32. The method as recited in claim 31, wherein the transmission from the remote control to place the command receiver in a learning mode comprises the label.

33. A method for using a remote control to program a command receiver to monitor
- 20 remote control transmissions, comprising:
- transmitting from the remote control a command code to place the command receiver in a learning mode;

transmitting from the remote control a sequence of command codes where a representation of the sequence of command codes is stored within a memory accessible to the command receiver; and

- transmitting from the remote control a command code to cause the command receiver to exit the learning mode;
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whereby the representation of the sequence of command codes stored in the memory is available to compare against future transmissions from the remote control to determine if the future transmission from the remote control comprises the sequence of command codes.

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34. The method as recited in claim 33, wherein a label is associated with the sequence of command codes transmitted by the remote control and the method further comprises the step of transmitting the label from the remote control to the command receiver.

15 35. The method as recited in claim 34, wherein the transmission from the remote control to place the command receiver in a learning mode comprises the label.

20 36. The method as recited in claim 35, wherein the label is representative of a key of the remote control which, upon activation, causes the transmission of the sequence of command codes.

37. A remote control having instructions for programming a command receiver to monitor remote control transmissions, the instructions performing steps comprising:

transmitting a command code to place the command receiver in a learning mode;

transmitting a sequence of command codes to thereby allow a representation of

the sequence of command codes to be stored within a memory accessible to the command

receiver; and

5 transmitting a command code to cause the command receiver to exit the learning

mode;

 whereby the representation of the sequence of command codes stored in the

memory is available to compare against future transmissions from the remote control to

determine if the future transmission from the remote control comprises the sequence of

10 command codes.

38. The remote control as recited in claim 37, wherein a label is associated with the

transmitted sequence of command codes and the instructions further comprise the step of

transmitting the label to the command receiver.

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39. The remote control as recited in claim 38, wherein the transmission to place the

command receiver in a learning mode comprises the label.

40. The remote control as recited in claim 38, wherein the label is representative of a key

20 of the remote control which, upon activation, causes the transmission of the sequence of

command codes.

41. The remote control as recited in claim 40, wherein the instructions further provide for user programming of the sequence of command codes and assignment of the sequence of command codes to the key.